CLAIMS

1 - A method for preparing a peptide or a peptide derivative comprising at least two enantiopure amino acids and at least one glycine molecule, comprising the production of a peptide of general formula

$$R^{1}R^{2}NCH_{2}-C(=O)-HN-A-COOH$$
 (I)

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in which A denotes a peptide chain comprising at least two enantiopure amino acids; and R¹ and R² are chosen, independently, from H or alkyl, alkenyl and aryl which are optionally functionalized, a peptide and a nucleic acid, or R¹ and R² together form a cycloalkyl or cycloheteroalkyl substituent, by reacting a compound of general formula

XCH₂-C(=O)-HN-A-COOY (II)

in which X denotes a group which can be substituted by nucleophilic substitution, chosen in particular from Cl and Br, and Y is chosen from H and cations, A has the same meaning as in formula (I); with a compound of general formula

HNR^1R^2 (III)

in which R¹ and R² have the same meaning as in formula (I).

- 2 The method according to Claim 1, in which the reaction is carried out in a liquid medium containing at least 25% by weight, relative to the total weight of the liquid medium, of compound of general formula (III).
- 3 The method according to Claim 2, in which the liquid medium contains at least 30% by weight of compound of general formula (III).
- 4 The method according to Claim 1, in which the reaction is carried out in a liquid medium in which a concentration of the compound of general formula (II) of less than or equal to 10% by weight, relative to the total weight of the liquid medium, is maintained.
 - 5 The method according to Claim 1, in which the reaction is carried out at a temperature of -30°C to +60°C.
- 6 The method according to Claim 1, in which the compound of general formula (III) is aqueous ammonia.
 - 7 The method according to Claim 1, in which A denotes a peptide chain made up of 2 to 20 amino acids.
 - 8 The method according to Claim 1, in which the compound of general formula (III) is a compound corresponding to general formula (I), at least R² in

the compound of general formula (III) is H, A is identical in the compound of general formula (II) and in the compound of general formula (III), and the product obtained is a peptide derivative of general formula

$$R^{1}N(CH_{2}-C(=O)-HN-A-COOH)_{2}$$
 (IV)

in which A denotes a peptide chain comprising at least 2 enantiopure amino acids; and R¹ is chosen from H, alkyl, alkenyl and aryl, which are optionally functionalized, a peptide or a nucleic acid.

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9 - The method according to Claim 1, comprising the production of the compound of general formula (Π) by peptide coupling of a fragment of general formula

$$XCH_2-C(=O)-HN-B$$
 (VI)

in which X denotes a group which can be substituted by nucleophilic substitution, chosen in particular from Cl and Br, and B denotes an amino acid or a peptide chain optionally bearing protective and/or activating groups, with a fragment C also denoting an amino acid or a peptide chain optionally bearing protective and/or activating groups.

- 10 The method according to Claim 9, in which B denotes an amino acid.
- 11 The method according to Claim 9, in which fragment C is a persilylated amino acid or a persilylated peptide chain.
- 20 12 The method according to any one of Claims 1 to 11, in which the group A of the compound of general formula (II) is Phe-Leu-Gly.
 - 13 A peptide derivative of general formula

$$R^{1}N(CH_{2}-C(=O)-HN-A-COOH)_{2}$$
 (IV)

- in which A denotes a peptide chain comprising at least 2 enantiopure amino acids, and R¹ is chosen from H, alkyl, alkenyl and aryl, which are optionally functionalized, a peptide or a nucleic acid.
 - 14 A peptide derivative according to Claim 13, in which the group A is chosen from Phe-Leu and Phe-Leu-Gly.
 - 15 A peptide derivative of general formula

$$R^{1}N(CH_{2}-C(=O)-HN-A1-COOH)(CH_{2}-C(=O)-HN-A2-COOH)(V)$$

in which A1 and A2 denote different peptide chains, and A1 or A2 comprises at least 2 enantiopure amino acids and R¹ is chosen from H, alkyl, alkenyl and aryl, which are optionally functionalized, a peptide or a nucleic acid.

- 16 The peptide derivative according to Claim 15, wherein A1 or A2 is chosen from Phe-Leu and Phe-Leu-Gly.
- 17 A pharmaceutical composition comprising a peptide derivative according to any one of Claims 13 to 16.
 - 18 A compound of general formula

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XCH₂-C(=O)-HN-A-COOY (II)

in which X denotes a group which can be substituted by nucleophilic substitution, chosen in particular from Cl and Br, and Y is chosen from H and cations, and A denotes a peptide chain made up of 2 to 20 amino acids, comprising at least 2 enantiopure amino acids.

19 - A method for producing the compound of general formula (II) according to Claim 18, by peptide coupling a fragment of general formula

$$XCH_2$$
-C(=O)-HN-B (V)

- in which X denotes a group which can be substituted by nucleophilic substitution, chosen in particular from Cl and Br, and B denotes an amino acid or a peptide chain optionally bearing protective and/or activating groups, with a fragment C also denoting an amino acid or a peptide chain optionally bearing protective and/or activating groups.
- 20 The method according to Claim 18, in which B denotes an amino 20 acid.
 - 21 The method according to Claim 19 or 20, in which fragment C is a persilylated amino acid or a persilylated peptide chain.